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WASSERMANN REACTION WITH GLYCEROLATED HUMAN SERUM TWO YEARS OLD

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In a previous report[1] I showed that glycerolated human serum a year old was still suitable for the Wassermann reaction, and that the results obtained with it were nearly identical with the results obtained with it while fresh. The present report deals with the same serums tested approximately two years after they had been obtained from the patients.

The serums were heated to about 55.5 C. for 30 minutes before they were mixed with glycerol; the others were discarded because they had become anticomplementary. Some of the serums which had been heated before they were mixed with glycerol were discarded because the tubes were not stoppered tightly enough to prevent evaporation.

The method of testing was identical with that described a year ago and needs no further description at this time.

The serums were obtained in the latter part of 1915 and early in 1916. The serum was drawn off the clot on the day after the bleeding, and each serum was divided into two portions, A and B. Portion A, unglycerolated, was tested at once. Portion B was heated to about 55.5 C. for 30 minutes, mixed with an equal volume of sterilized, pure glycerol, and kept at room temperature in a cork-stoppered test tube. On May 5-6, 1918, Portion B of each serum was tested and the result was compared with that given by Portion A.

The results are shown in the table. The results obtained with Portions B were almost identical with the results obtained with Portions A about two years before. Serum 30 had become strongly anticomplementary and all the other serums had become moderately anticomplementary. On heating the serums to 56 C. for 30 minutes the anticomplementary property disappeared.

SUMMARY

Glycerolated serum two years old gave results almost identical with those given by the fresh serum.

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[1] Ruediger, E. H.: Jour. Infect. Dis., 1917, 21, p. 502.

TABLE 1

WASSERMANN REACTION WITH GLYCEROLATED HUMAN SERUM TWO YEARS OLD

No.	Date of Bleeding	Portions: A, Non-glycerolated; B, Glycerolated	Heated	Reheated	Tested	Amboceptor per Tube Unit	Readings*						Result
							Antigen Tubes			Control Tubes			
							1	2	3	1′	2′	3′	
1	12/27/15	A	12/28/15		12/28/15	1.0	+	+	tr	+	+	tr	Negative
		B	12/28/15		3/ 5/18	1.25	+	±	0	+	±	0	Negative
		B	12/28/15	3/ 5/18	3/ 5/18	1.25	+	+	tr	+	+	tr	Negative
2	12/27/15	A	12/28/15		12/28/15	1.0	+	+	tr	+	+	tr	Negative
		B	12/28/15		3/ 5/18	1.25	+	±	0	+	±	0	Negative
		B	12/28/15	3/ 5/18	3/ 5/18	1.25	+	+	tr	+	+	tr	Negative
3	12/27/15	A	12/28/15		12/28/15	1.0	+	+	tr	+	+	tr	Negative
		B	12/28/15		3/ 5/18	1.25	+	±	0	+	±	0	Negative
		B	12/28/15	3/ 5/18	3/ 5/18	1.25	+	+	±	+	+	±	Negative
4	12/27/15	A	12/28/15		12/28/15	1.0.	+	+	0	+	+	0	Negative
		B	12/28/15		3/ 5/18	1.25	+	±	0	+	±	0	Negative
		B	12/28/15	3/ 5/18	3/ 8/18	1.25	+	+	tr	+	+	tr	Negative
5	12/29/15	A	12/30/15		12/30/15	1.0	+	+	tr	+	+	tr	Negative
		B	12/30/15		3/ 5/18	1.25	+	±	0	+	±	0	Negative
		B	12/30/15	3/ 5/18	3/ 5/18	1.25	+	+	tr	+	+	tr	Negative
6	12/29/15	A	12/30/15		12/30/15	1.0	+	+	tr	+	+	tr	Negative
		B	12/30/15		3/ 5/18	1.25	+	+	0	+	+	0	Negative
		B	12/30/15	3/ 5/18	3/ 5/18	1.25	+	+	±	+	+	±	Negative
7	12/29/15	A	12/30/15		12/30/15	1.0	+	+	tr	+	+	tr	Negative
		B	12/30/15		3/ 5/18	1.25	+	±	0	+	±	0	Negative
		B	12/30/15	3/ 5/18	3/ 5/18	1.25	+	+	0	+	+	0	Negative
8	12/29/15	A	12/30/15		12/30/18	1.0	+	+	tr	+	+	tr	Negative
		B	12/30/15		3/ 5/18	1.25	+	±	0	+	±	0	Negative
		B	12/30/15	3/ 5/18	3/ 5/18	1.25	+	+	tr	+	+	tr	Negative
9	4/ 5/16	A	4/ 6/16		4/ 6/16	1.0	+	+	±	+	+	±	Negative
		B	4/ 6/16		3/ 5/18	1.25	+	0	0	+	0	0	Negative
		B	4/ 6/16	3/ 5/18	3/ 5/18	1.25	+	+	0	+	+	0	Negative
10	4/ 5/16	A	4/ 6/16		4/ 6/16	1.0	+	+	±	+	+	±	Negative
		B	4/ 6/16		3/ 5/18	1.25	+	±	0	+	±	0	Negative
		B	4/ 6/16	3/ 5/18	3/ 5/18	1.25	+	+	tr	+	+	tr	Negative
11	4/ 5/16	A	4/ 6/16		4/ 6/16	1.0	+	+	±	+	+	±	Negative
		B	4/ 6/16		3/ 5/18	1.25	+	+	0	+	+	0	Negative
		B	4/ 6/16	3/ 5/18	3/ 5/18	1.25	+	+	tr	+	+	tr	Negative
12	4/ 5/16	A	4/ 6/16		4/ 6/16	1.0	+	+	±	+	+	±	Negative
		B	4/ 6/16		3/ 5/18	1.25	+	±	0	+	±	0	Negative
		B	4/ 6/16	3/ 5/18	3/ 5/18	1.25	+	+	tr	+	+	±	Negative
13	4/ 7/16	A	4/ 8/16		4/ 8/16	1.0	+	+	±	+	+	±	Negative
		B	4/ 8/16		3/ 5/18	1.25	+	±	0	+	±	0	Negative
		B	4/ 8/16	3/ 5/18	3/ 5/18	1.25	+	+	±	+	+	±	Negative
14	4/ 9/16	A	4/10/16		4/10/16	1.0	+	+	±	+	+	±	Negative
		B	4/10/16		3/ 5/18	1.25	+	±	0	+	±	0	Negative
		B	4/10/16	3/ 5/18	3/ 5/18	1.25	+	+	tr	+	+	tr	Negative
15	11/27/15	A	11/28/15		11/28/15	1.0	+	tr	0	+	±	0	Weakly positive
		B	11/28/15		3/ 5/18	1.25	+	0	0	+	tr	0	Weakly positive
		B	11/28/15	3/ 5/18	3/ 5/18	1.25	+	+	0	+	+	tr	Weakly positive
16	4/ 5/16	A	4/ 6/16		4/ 6/16	1.0	+	+	tr	+	+	±	Weakly positive
		B	4/ 6/16		3/ 5/18	1.25	+	tr	0	+	+	0	Moderately positive
		B	4/ 6/16	3/ 5/18	3/ 5/18	1.25	+	+	0	+	+	tr	Weakly positive
17	4/ 5/16	A	4/ 6/16		4/ 6/16	1.0	+	+	tr	+	+	±	Weakly positive
		B	4/ 6/16		3/ 5/18	1.25	+	±	0	+	+	0	Weakly positive
		B	4/ 6/16	3/ 5/18	3/ 5/18	1.25	+	+	tr	+	+	±	Weakly positive
18	4/10/16	A	4/11/16		4/11/16	1.0	+	+	tr	+	+	±	Weakly positive
		B	4/11/16		3/ 5/18	1.25	+	tr	0	+	+	0	Moderately positive
		B	4/11/16	3/ 5/18	3/ 5/18	1.25	+	+	0	+	+	tr	Weakly positive
19	11/26/15	A	11/27/15		11/27/15	1.0	+	±	0	+	+	0	Weakly positive
		B	11/27/15		3/ 5/18	1.25	+	tr	0	+	+	0	Moderately positive
		B	11/27/15	3/ 5/18	3/ 5/18	1.25	+	+	0	+	+	tr	Weakly positive
20	11/26/15	A	11/27/15		11/27/15	1.0	0	0	0	+	±	0	Strongly positive
		B	11/27/15		3/ 5/18	1.25	tr	0	0	+	+	0	Strongly positive
		B	11/27/15	3/ 6/18	3/ 5/18	1.25	+	0	0	+	+	tr	Strongly positive
21	11/26/15	A	11/27/15		11/27/15	1.0	+	0	0	+	+	tr	Strongly positive
		B	11/27/15		3/ 6/18	1.25	tr	0	0	+	±	0	Strongly positive
		B	11/27/15	3/ 6/18	3/ 6/18	1.25	+	±	0	+	+	±	Strongly positive
22	11/27/15	A	11/28/15		11/28/15	1.0	tr	0	0	+	+	tr	Strongly positive
		B	11/28/15		3/ 6/18	1.25	0	0	0	+	±	0	Strongly positive
		B	11/28/15	3/ 6/18	3/ 6/18	1.25	±	0	0	+	+	tr	Strongly positive

TABLE 1—*Continued*

WASSERMANN REACTION WITH GLYCEROLATED HUMAN SERUM TWO YEARS OLD

No.	Date of Bleeding	Portions: A, Non-glycerolated; B, Glycerolated	Heated	Reheated	Tested	Amboceptor per Tube Unit	Readings*						Result
							Antigen Tubes			Control Tubes			
							1	2	3	1′	2′	3′	
23	11/27/15	A	11/28/15		11/28/15	1.0	+	0	0	+	+	tr	Strongly positive
		B	11/28/15		3/ 6/18	1.25	tr	0	0	+	tr	0	Strongly positive
		B	11/28/15	3/ 6/18	3/ 6/18	1.25	+	tr	0	+	+	tr	Strongly positive
24	11/27/15	A	11/28/15		11/28/15	1.0	tr	0	0	+	+	0	Strongly positive
		B	11/28/15		3/ 6/18	1.25	±	0	0	+	+	0	Strongly positive
		B	11/28/15	3/ 6/18	3/ 6/18	1.25	+	tr	0	+	+	tr	Strongly positive
25	11/30/15	A	12/ 1/15		12/ 1/15	1.0	+	0	0	+	+	tr	Strongly positive
		B	12/ 1/15		3/ 6/18	1.25	0	0	0	+	tr	0	Strongly positive
		B	12/ 1/15	3/ 6/18	3/ 6/18	1.25	+	0	0	+	+	tr	Strongly positive
26	11/30/15	A	12/ 1/15		12/ 1/15	1.0	+	tr	0	+	+	tr	Strongly positive
		B	12/ 1/15		3/ 6/18	1.25	±	0	0	+	±	0	Strongly positive
		B	12/ 1/15	3/ 6/18	3/ 6/18	1.25	+	+	0	+	+	±	Moderately positive
27	4/ 5/16	A	4/ 6/16		4/ 6/16	1.0	+	±	0	+	+	±	Strongly positive
		B	4/ 6/16		3/ 6/18	1.25	tr	0	0	+	tr	0	Strongly positive
		B	4/ 6/16	3/ 6/18	3/ 6/18	1.25	+	tr	0	+	+	tr	Strongly positive
28	4/ 5/16	A	4/ 6/16		4/ 6/16	1.0	+	±	0	+	+	±	Strongly positive
		B	4/ 6/16		3/ 6/18	1.25	+	0	0	+	+	0	Strongly positive
		B	4/ 6/16	3/ 6/18	3/ 6/18	1.25	+	±	0	+	+	±	Strongly positive
29	11/27/15	A	11/28/15		11/28/15	1.0	0	0	0	+	+	tr	Strongly positive
		B	11/28/15		3/ 6/18	1.25	0	0	0	+	±	0	Strongly positive
		B	11/28/15	3/ 6/18	3/ 6/18	1.25	0	0	0	+	+	tr	Strongly positive
30	11/30/15	A	12/ 1/15		12/ 1/15	1.0	0	0	0	+	+	0	Strongly positive
		B	12/ 1/15		3/ 6/18	1.25	0	0	0	0	0	0	Anticomplementary
		B	12/ 1/15	3/ 6/18	3/ 6/18	1.25	0	0	0	+	±	0	Strongly positive

* Explanation: + = complete hemolysis; ± = hemolysis between 50% and 100%; tr (trace) = hemolysis up to 50%; 0 = no hemolysis.

All serums had become somewhat anticomplementary but the anticomplementary property was destroyed by heating to 56 C. for 30 minutes. The result obtained with the Wassermann reaction was not affected by the second heating.

Because of recent modifications in the technic for the Wassermann reaction, and because of the difficulty encountered in keeping serum in cork-stoppered test tubes, there will be no further reports on these serums. A new series has been started in which the serum is kept in hermetically sealed glass ampoules.